

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Kevin J. Canning on 12/9/2009.

In the claims:

(I) In claim 1:

1. (currently amended) In an electronic device a method for accessing an image acquisition device associated with the electronic device independently of an interface protocol of the image acquisition device, the method comprising:

receiving a request to access the image acquisition device, the request specifying a format for a response from the image acquisition device;

establishing a communication channel with a hardware interface of the image acquisition device, the communication channel operating independently of the interface protocol of the image acquisition device wherein establishing the communication channel comprises:

communicating with an interface of the image acquisition device to establish communication therewith; and

establishing one or more communication procedures for communication with the image acquisition device, the communication procedures providing instructions on how data transfers are managed across the communication channel, wherein the one or more communication procedures provides instructions for at least one of the following: logging data to file, buffering data received from the image acquisition device, configuring selected properties associated with the image acquisition device, generating events, and translating error codes from the image acquisition device;

configuring properties of the image acquisition device supported independently of the interface protocol of the image acquisition device and accessing a feature of the image acquisition device using the communication channel to receive the response in the specified format, where configuring the properties of the image acquisition device further comprises specifying a color space for images acquired by the image acquisition device.

2. (canceled)

3. (canceled)

4. (canceled)

5. (previously presented) The method of Claim 1, wherein the request is received from a user interface.

6. (original) The method of Claim 5, wherein said user interface comprises an object based interface having methods and attributes.

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (currently amended) A method performed in an electronic device for communicating with a selected image acquisition device associated with the electronic device, the method comprising:

establishing a first communication link between a user of the electronic device and an image acquisition engine the first communication link operating independently of a hardware interface of the selected image acquisition device; and

establishing a second communication link between the image acquisition engine and an interface of the selected image acquisition device, the second communication link operating independently of an interface protocol of the selected image acquisition device to allow the user to communicate with the selected image acquisition device, wherein the second communication link has one or more communication procedures, the one or more communication procedures providing instructions for at least one of: logging data to file, buffering data received from the

selected image acquisition device, configuring selected properties associated with the selected acquisition device, generating events and translating error codes from the selected image acquisition device[]];

configuring properties of the image acquisition device supported independently of the interface protocol of the image acquisition device and accessing a feature of the image acquisition device using the communication channel to receive a response in the specified format, where configuring the properties of the image acquisition device further comprises specifying a color space for images acquired by the image acquisition device,

11. (previously presented) The method of Claim 10, further comprising:

associating the image acquisition engine with a driver adapted for communicating with the interface of the selected image acquisition device.

12. (previously presented) The method of Claim 10, further comprising:

selecting the image acquisition device from a plurality of image acquisition devices associated with the electronic device.

13. (previously presented) The method of Claim 11, further comprising:

abstracting a representation of the selected image acquisition device for use in establishing the second communication link by using information provided by the driver.

14. (previously presented) The method of Claim 10, wherein the interfacing comprises:

rendering on a display device of the electronic device a user interface for use by the user for interfacing with the image acquisition engine.

15. (currently amended) The method of Claim 10 further comprising:

triggering the selected image acquisition device on a selected event to acquire one or more images.

16. (currently amended) The method of Claim 15 further comprising:

previewing one or more images from the selected image acquisition device before, while, or after the triggering of the image acquisition device occurs.

17. (currently amended) The method of Claim 10 further comprising:

montaging one or more images acquired by the selected image acquisition device on a display device associated with electronic device.

18. (currently amended) The method of Claim 10 further comprising:

identifying a region of interest for an image acquired by the selected image acquisition device.

19. (currently amended) The method of Claim 10, further comprising:

requesting the image acquisition engine to determine an interface for the selected image acquisition device installed and accessible to the image acquisition engine.

20. (currently amended) The method of Claim 10, further comprising:

requesting the image acquisition engine to determine each interface associated with an image acquisition device installed and accessible to the selected image acquisition engine.

21. (original) The method of Claim 20, wherein the image acquisition engine determines each interface associated with an image acquisition installed and accessible to the image acquisition engine across one or more image acquisition device types.

22. (previously presented) The method of Claim 10, further comprising:

providing the image acquisition engine with one or more requests for configuring the selected image acquisition device.

23. (previously presented) The method of Claim 22, further comprising:

configuring the selected image acquisition device based on each provided request.

24. (previously presented) The method of Claim 22, further comprising:

configuring a type of image acquisition based on each provided request.

25. (original) The method of Claim 24, wherein the type of image acquisition comprises still image acquisition.

26. (original) The method of Claim 24, wherein the type of image acquisition comprises a plurality of images acquired in a sequence.

27. (currently amended) The method of Claim 10, further comprising:

requesting the image acquisition engine to acquire a number of images using the selected image acquisition device.

28. (original) The method of Claim 27, wherein the number of images comprises a single image.

29. (original) The method of Claim 27, wherein the number of images comprises a plurality of images.

30. (original) The method of Claim 10, wherein the image acquisition engine is capable of feeding to the user one or more live images from the selected image acquisition device.

31. (currently amended) The method of Claim 10, further comprising specifying a color space for the images acquired by the selected image acquisition device.

32. (currently amended) A device readable storage medium holding device executable instructions for performing a method in an electronic device for accessing an image acquisition device associated with the electronic device independently of an interface protocol of the image acquisition device, the method comprising:

accessing ~~one of a first image acquisition device from~~ a plurality of image acquisition devices, the plurality of image acquisition devices implementing a plurality of different interfaces, by:

automatically determining available types of triggers supported by ~~a particular~~
the first image acquisition device;

providing information on the available types of triggers supported by the
~~particular~~ first image acquisition device;

accepting a request to access the ~~particular~~ first image acquisition device;

creating a communication channel with the ~~particular~~ first image acquisition device, the communication channel operating independently of the interface protocol of the first image acquisition device, wherein ~~creating~~ the communication channel includes
~~comprises:~~

~~determining one or more communication procedures for communication with the particular image acquisition device, the communication procedures~~ providing instructions on how data transfers are managed across the communication channel, wherein the one or more communication procedures provides instructions for at least one of: logging data to file, buffering data received from the first image acquisition device, configuring selected properties

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associated with [[the]] a particular image acquisition device, generating events, and translating error codes from the first image acquisition device; and

accessing a feature of the first image acquisition device using the communication channel operating independently of the interface protocol of the first image acquisition device, the feature affecting a resulting image acquired from the particular image acquisition device.

33. (currently amended) The device readable storage medium of Claim 32, wherein the request specifies a format for a response from the particular first image acquisition device.

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34. (canceled)

35. (canceled)

36. (previously presented) The device readable storage medium of Claim 32, wherein the request is received from a user interface.

37. (previously presented) The device readable storage medium of Claim 36, wherein said user interface comprises an object based interface having methods and attributes.

38. (currently amended) A program holding product having instructions executable by an electronic device which, when executed by a processor of the electronic device allows a user of

the electronic device to communicate with a selected image acquisition device associated with the electronic device by:

interfacing a user of the electronic device with one of a plurality of image acquisition engines, the plurality of image acquisition engines implementing a plurality of different image acquisition interfaces;

linking the image acquisition engine and an interface of the selected image acquisition device using a communication channel operating independently of an interface protocol of the selected image acquisition device to allow the user to communicate with the selected image acquisition device, wherein the communication channel includes one or more communication procedures that provide instructions on how data transfers are managed across the communication channel, wherein the one or more communication procedures provide instructions for at least one of: logging data to file, buffering data received from the selected image acquisition device, configuring selected properties associated with the selected image acquisition device, generating events and translating error code from the selected image acquisition device;

automatically determining available types of triggers supported by the selected image acquisition device; and

providing information to the user on the available types of triggers supported by the selected image acquisition device.

39. (previously presented) The program product of Claim 38, further comprising:

associating the image acquisition engine with a driver adapted for communicating with the interface of the selected image acquisition device.

40. (previously presented) The program product of Claim 38, further comprising:

selecting the image acquisition device from a plurality of image acquisitions devices associated with the electronic device.

41. (previously presented) The program product of Claim 38, further comprising:

abstracting a representation of the selected image acquisition device for use in linking the image acquisition engine and the interface of the selected image acquisition device provided by the driver.

42. (previously presented) The program product of Claim 38, wherein the interfacing comprises:

rendering on a display device of the electronic device a user interface for use by the user for interfacing with the image acquisition engine.

43. (previously presented) The program product of Claim 38 further comprising:

triggering the image acquisition device on a selected event to acquire one or more images.

44. (currently amended) The program product of Claim 43 further comprising:

previewing one or more images from the selected image acquisition device before, while, or after the triggering of the image acquisition device occurs.

45. (currently amended) The program product of Claim 38 further comprising:

montaging one or more images acquired by the selected image acquisition device on a display device associated with electronic device.

46. (currently amended) The program product of Claim 38 further comprising:

identifying a region of interest for an image acquired by the selected image acquisition device.

3. The following is an examiner's statement of reasons for allowance:

As to claims 1, 10, 32, 38 Brumley et al (US Patent 5,926,775) in view of Tuatini(US 2001/0047385 A1) and further in view of Fisher(US 6689319 B 1) as recited in claims 1, 10, 32, 38 , when taken in the context of the claims as a whole, establishing one or more communication procedures for communication with the image acquisition device, the communication procedures providing instructions on how data transfers are managed across the communication channel, wherein the one or more communication procedures provides instructions for at least one of[[.]]; logging data to file, buffering data received from the image acquisition device, configuring selected properties associated with the image acquisition device, generating events, and translating error codes from the image acquisition device; configuring properties of the image

acquisition device supported independently of the interface protocol of the image acquisition device and accessing a feature of the image acquisition device using the communication channel to receive the response in the specified format, where configuring the properties of the image acquisition device further comprises specifying a color space for images acquired by the image acquisition device, automatically determining available types of triggers supported by the selected image acquisition device; and providing information to the user on the available types of triggers supported by the selected image acquisition device as recited in the independent claims 1, 10, 32, 38. Moreover, evidence for modifying the prior art teachings by one of ordinary skill level in the art was not uncovered so as to result in the invention as recited in claims 1, 10, 32, 38.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (571) 272-3767. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sough Hyung can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/LeChi Truong/

Primary Examiner, Art Unit 2194

LeChi Truong

December 29, 2009